

## DETAILED ACTION

### *Status of Application*

Claims 1-8, 10-25, 28, 32-34 are canceled.

Claims 9, 26, 27, 29-31, and 35 are pending and presented for examination.

### *Allowable Subject Matter*

Claims 9, 26, 27, 29-31, and 35 are allowed.

The following is an **examiner's statement of reasons for allowance**:

The closest prior art on record: Umemura et al. (US Patent No. 4,487,627), Miyake et al. (JP 10-317086), Hara et al. (JP 05-283751), and Miglierini et al. (NATO Science Series, 1998) teach methods and properties of iron silicides but fail to teach the manufacturing method of iron silicide powder comprising reducing steps, particularly a two stage synthesis from FeSi to FeSi<sub>2</sub>. The Umemura reference teaches mixing iron oxides and silicon materials first, prior to reducing and does not teach the two step synthesis [See Examples]. Miyake teaches dissolving iron and silicon and first producing alpha and then beta FeSi<sub>2</sub> but fails to teach a reduction step or the two step synthesis [See Paragraph 0002 and 0003]. The Hara reference teaches a two step production process of FeSi<sub>2</sub>, which involves adhering Si particles to the surface of FeSi but does not specify reduction or phase transitions [See Abstract]. And finally, Miglierini et al. disclose the phase transition mechanism in Figure 1 [Page 14] but one would not

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have been motivated to produce alpha phase  $\text{FeSi}_2$  in the same method as claimed by the present invention based on this information alone.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Claims 9, 26, 27, 29-31, and 35 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JENNIFER A. SMITH whose telephone number is (571)270-3599. The examiner can normally be reached on Monday - Thursday, 9:30am to 6:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571)272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/J.A. LORENZO/

Supervisory Patent Examiner, Art Unit 1793

Jennifer A. Smith

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JS